

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims: Please amend the claims as follows:

We claim:

Claim 1. (Currently Amended) Method A method for the sequential production of partial proteomes from the a complete proteome of a cell preparation, ~~characterised by the following method steps comprising:~~

- a) ~~provision of~~ providing a sample containing a cell preparation,
- b) ~~extraction of~~ extracting the cytosolic proteins and the membrane/organelle proteins from the sample provided in step a), leaving a cell nucleus preparation, and
- c) ~~extraction of~~ extracting the proteins from the cell nucleus interior from the cell nucleus preparation obtained in step b) by ~~treatment~~ treating with an extraction buffer having a pH of between 6.5 and 8 which comprises ~~at least the following constituents:~~
 - in total from 0.1 to 7 per cent by weight of one or more nonionic detergents,
 - in total from 0.05 to 3 per cent by weight of one or more cholic acid derivatives, and
 - one or more salts ~~from the group consisting of the alkali metal and/or ammonium salts~~ in a total concentration of between 75 and 500 mmol/l,

wherein detergent-resistant proteins of the cytoskeleton and of the nuclear matrix are not extracted to a significant extent together with the proteins from the cell nucleus interior, but instead remain in the extraction residue.

Claim 2. (Currently Amended) Method A method according to Claim 1, characterised in that wherein the extraction buffer employed in step c) additionally comprises a nuclease.

Claim 3. (Currently Amended) Method A method according to Claim 1, characterised in that wherein the extraction buffer employed in step c) comprises polyoxyethylene sorbitan monopalmitate as nonionic detergent, deoxycholate as cholic acid derivative and NaCl as alkali metal salt.

Claim 4. (Currently Amended) ~~Method A method~~ according to claim 1, characterised in that ~~the extraction of the cytosolic proteins and the membrane/organelle proteins in~~ wherein step b) is ~~carried out by~~ comprises:

- b i) ~~extraction of~~ extracting the cytosolic proteins from the sample provided in step a) by selective ~~permeabilisation~~ permeabilization of the plasma membrane without significantly impairing the integrity of the subcellular membrane/ organelle structures, the cell nucleus and the cytoskeleton.
- b ii) ~~extraction of~~ extracting the membrane/organelle proteins from the part of the sample remaining after the extraction in step b i) with retention of the structural integrity of cell nucleus and cytoskeleton.

Claim 5. (Currently Amended) ~~Method A method~~ according to Claim 1, characterised in that wherein the proteins of the detergent-resistant cytoskeleton and of the nuclear matrix are, in an additional method step d), extracted as a further partial proteome from the extraction residue remaining in step c).

Claim 6. (Currently Amended) ~~Protein A protein extraction kit~~ at least containing an extraction buffer having a pH of between 6.5 and 8 which further comprises ~~at least the following constituents~~:

- in total from 0.1 to 7 per cent by weight of one or more nonionic detergents
- in total from 0.05 to 3 per cent by weight of one or more cholic acid derivatives
- one or more salts from the group consisting of the ammonium and/or alkali metal salts in a total concentration of between 75 and 500 mmol/l.

Claim 7. (Currently Amended) ~~Kit A kit~~ according to claim 6, additionally containing a nuclease.

Claim 8. (Currently Amended) ~~Kit A kit~~ according to claim 6, additionally containing a buffer for extraction of the cytosolic proteins and/or the membrane/organelle proteins from

cell preparations and a buffer for extraction of the proteins of the detergent-resistant cytoskeleton and of the nuclear matrix.

Claim 9. (New) A method of claim 1 wherein step b) comprises treatment of with a non-ionic detergent or a zwitterionic detergent under mild conditions.

Claim 10. (New) A method of claim 9, wherein said detergent comprises octylphenoxypolyethoxyethanol or polyethylene glycol p-isooctyl phenyl ether.

Claim 11. (New) A method of claim 1, wherein said extraction buffer has a pH of between 6.9 and pH 7.8.

Claim 12. (New) A kit of claim 6, wherein said extraction buffer has a pH of between 6.9 and pH 7.8.

Claim 13. (New) A method of claim 1, wherein said extraction buffer comprises MOPSO, BES, MOPS, phosphate or PIPES at a concentration from between 2 and 100 mM.

Claim 14. (New) A kit of claim 6, wherein said extraction buffer comprises MOPSO, BES, MOPS, phosphate or PIPES at a concentration from between 2 and 100 mM.

Claim 15. (New) A method of claim 1, wherein said non-ionic detergent comprises 0.2 and 5% by weight of polyoxyethylene sorbitan monopalmitate and said cholic acid derivative comprises 0.1 to 2.5% by weight of Na deoxycholate.

Claim 16. (New) A kit of claim 6, wherein said non-ionic detergent comprises 0.2 and 5% by weight of polyoxyethylene sorbitan monopalmitate and said cholic acid derivative comprises 0.1 to 2.5% by weight of Na deoxycholate.

Claim 17. (New) A method of claim 1, wherein said extraction buffer comprises 10 mM PIPES, 1% by weight of polyoxyethylene sorbitan monopalmitate, 0.5% by weight of Na deoxycholate and 350 mM NaCl.

Claim 18. (New) A kit of claim 6, wherein said extraction buffer comprises 10 mM PIPES, 1% by weight of polyoxyethylene sorbitan monopalmitate, 0.5% by weight of Na deoxycholate and 350 mM NaCl.

Claim 19. (New) A method of claim 2, wherein said nuclease is an endonuclease from *Serratia marcescens*.

Claim 20. (New) A kit of claim 7, wherein said nuclease is an endonuclease from *Serratia marcescens*.